Statement of Basis
Ascend Performance Materials Operations, LLC
Morgan County
712-0010

Ascend Performance Materials Operations has applied for a renewal of Major Source Operating Permit 712-0002. This proposed Title V Major Source Operating Permit is issued under the provisions of ADEM Admin. Code R. 335-3-16. The above named applicant has requested authorization to perform the work or operate the facility shown on the application and drawings, plans and other documents attached hereto or on file with the Air Division of the Alabama Department of Environmental Management, in accordance with the terms and conditions of this permit.

Background

This facility is a Chemical Plant which manufactures nylon intermediate chemicals and acrylic fibers. The facility is allowed to operate 8760 hours per year unless otherwise specified. Based upon the Title V application, this facility is a major source for carbon monoxide (CO), nitrogen oxides (NO_x), particulate matter (PM), sulfur dioxide (SO_2), volatile organic compounds (VOCs), and hazardous air pollutants (HAPs) and Green House Gases (CO_2e).

ADN Unit Operations

Adiponitrile (ADN) Manufacturing Unit

The equipment of the Adiponitrile (ADN) Manufacturing Unit (ADN unit) includes Reactor Systems A, B, C, and D and the associated refining and recovery equipment. There were several Air Permits which cover units within the ADN unit (excluding tanks). These permits included:

Air Permit #	Description
Z028	Adiponitrile Manufacturing Process
X032	Propionitrile (PN) Purge Distillation Column Vented to Area 403 Refining/Recovery Scrubber
X034	North Prestripper Column Vented to the Area 402 Non-sequestered Absorber
X045	Propionitrile (PN) Refiner Column Vented to the Area 403 Refining/Recovery Absorber
X047	Propionitrile Waste Railcar/Truck Loadout vented to 411 Vent Scrubber (Tank Farm Absorber)
X048	Low Boiler Stripper Column Vented to the Area 403 Refining/Recovery Absorber
X049	ADN Flash Column Vented to the Area 403 Refining/Recovery Absorber
X051	South Pre-stripper Distillation Column Vented to the Area 402 Non-sequestered Absorber

Several emission points within the ADN unit have VOC limits which were taken to avoid a PSD review.

The VOC emissions from the A off-gas scrubber are limited to ≤ 1.71 lb/hr, from the B off-gas scrubber are limited to ≤ 2.85 lb/hr, from the C off-gas scrubber are limited to ≤ 2.66 lb/hr, from the D off-gas scrubber are limited to ≤ 3.30 lb/hr, from the non-sequestered absorber are limited to ≤ 1.01 lb/hr, from the Area 403 Absorber are limited to 0.61 lb/hr, from the Area 411 Tank Farm Absorber are limited to ≤ 0.16 lb/hr, and from the Area Synthesis Vent Absorber are limited to 0.28 lb/hr.

The ADN unit is subject to the requirements of the HON. This unit is required to implement an LDAR program as specified in Subpart H of the HON for the components in OHAP service. This unit is also subject to the requirements of Subparts F and G of the HON. According to the Notification of Compliance Status (NCS), there are 13 Group 2 process vents in the ADN unit. These process vents were defined as: the Refining Recovery Sump Vent (ADN101), the Refining/Recovery Absorber (ADN 102), the Synthesis Vent Absorber (ADN 103), the A-D off gas absorbers (ADN 104-107), the Electrolyte Filter Sump (ADN 108), the 411 Absorber (ADN 109), the Cell Package Building Vent (ADN 110), the Synthesis Sump Vent (ADN112), the Package Decontamination Emissions (ADN 113), and the Non-sequestered Absorber (ADN 114). Ascend's 8/19/98 letter revised that each of the process vents were classified as Group 2 process vents with TREs greater than 4.0 (rather than based upon 50 ppm concentration). The NCS identified one Group 1 HON Tank, no Group 2 HON Tanks, and no Group 1 or Group 2 HON transfer racks. This facility has also indicated that all wastewater streams are Group 2.

This unit is subject to the LDAR requirements of NSPS, Subpart VV. The facility is required to implement a Subpart VV LDAR program for the VOC components which are not covered by the HON LDAR program.

The A-D reactor systems are subject to the requirements of NSPS, Subpart RRR, for SOCMI Reactor Processes. Each of these vents has a TRE greater than 8.

The following distillation columns in the ADN unit are subject to the requirements of Subpart NNN: the Precut Column, the Propionitrile (PN) Purge Distillation Column, the North Prestripper Column, the Propionitrile (PN) Refiner Column, the Low Boiler Stripper Column, and the South Prestripper Distillation Column.

The Precut Column, the Propionitrile (PN) Purge Distillation Column, the Propionitrile (PN) Refiner Column, and the Low Boiler Stripper Column are vented to the 403 Refining/Recovery Absorber. The North and South Prestripper Columns are vented to the Area 402 Nonsequestered Absorber. The TRE of each of these sources is greater than 8.0.

The facility is currently required to comply with a monitoring plan detailed in a letter from this Department to Monsanto (now Ascend) dated December 23, 1992, to determine compliance with the VOC emission limits on the A-D off-gas scrubbers (EPs ADN104, ADN 105, ADN 106, and ADN 107). Ascend uses ADN solvent as the scrubbing liquor in the scrubbers. According to the 12/23/92 letter, the maximum AN concentration in the lean solvent is 500 ppm and the minimum lean solvent flows, correlated with the lean solvent temperatures, are as indicated below.

Lean Solvent Temperature (ºC)	Minimum Lean Solvent Flow (kpph/ kAmp)
20	0.89
25	0.90
30	1.02
35	1.10
40	1.20

The limit on the lean solvent temperature is dependent on several variables; therefore the facility is required to record the actual lean solvent temperature, the calculated allowable lean solvent temperature, and the AN concentration in the lean solvent on a continuous basis. A computer model is utilized to calculate the allowable lean solvent temperature. Compliance is determined by a comparison of the calculated allowable lean solvent temperature and the actual lean solvent temperature. Exceedances are defined as any period when the above listed limitations are exceeded for a period of greater than 3-hours. The facility is required to record the actual lean solvent temperature, the calculated allowable lean solvent temperature, and the actual AN concentration in the lean solvent on a continuous basis.

The facility is also currently required to comply with a monitoring plan detailed in a letter from Monsanto (now Ascend) to this Department on November 1, 1994 to determine compliance with the VOC limits on the Nonsequestered Absorber (Prestripper Vent Scrubber – ADN 114), the Area 403 Absorber (Refining/Recovery Absorber – ADN 102), the Area 411 Tank Farm Scrubber (ADN 109), and the Area Synthesis Vent Absorber (A/B Vent Scrubber – ADN 103). Ascend uses ADN solvent as the scrubbing liquor in these scrubbers. The plan requires the facility to continuously monitor the actual temperature and flow rate of the lean solvent. These values are input into the computer model to determine a maximum lean solvent AN concentration. The actual and calculated allowable AN concentrations are compared to determine compliance. Exceedances are defined as any period when the above listed limitations are exceeded for a period of greater than 3-hours. The plan requires the facility to record the actual lean solvent temperature, the actual lean flow, the actual AN concentration, and the calculated maximum AN concentration. Semiannual reports of any exceedance are required.

Since the TREs of the Reactors are greater than 8.0, no monitoring is required under the NSPS. Compliance with the monitoring requirements of RRR was determined to be sufficient for periodic monitoring. Ascend voluntarily monitors the rich solvent specific gravity and temperature of each reactor absorber, however, this monitoring is not required under Subpart RRR.

Since the TREs of the affected distillation columns are greater than 8.0, no monitoring is required under the NSPS. Ascend voluntarily monitors the rich solvent specific gravity and temperature of the 403 Refining/Recovery Absorber and the NSQ Absorber; however, this monitoring is not required under Subpart NNN.

The monitoring currently required under the current permits and applicable regulations is considered to be sufficient for periodic monitoring. The HON was promulgated after November 15, 1990, and therefore no periodic monitoring would be required for OHAPs and the TREs of the subject reactors and distillation columns are much greater than 8.0 and therefore no periodic monitoring was determined to be necessary.

The QA batch process is also a part of the ADN unit that is subject to the MON. Ascend has designated this process as Group 2 and is required to calculate the 12 month rolling total of OHAP emissions each month and submit semi-annual reports detailing any changes to the group determination status.

State Regulations:

- 335-3-10-.02; VOC
- 335-3-14; VOC
- 335-3-11-.06(6); OHAP

Control Equipment:
Absorbers

Emission Limits and Proposed Periodic Monitoring:

Pollutant	**Emission Limit**	**Basis**	**Periodic Monitoring**
VOC	"A" ≤ 1.71 lb/hr "B" ≤ 2.85 lb/hr "C" ≤ 2.66 lb/hr "D" ≤ 3.30 lb/hr NSQ Absorber: ≤ 1.01 lb/hr Area 403 Absorber: ≤ 0.61 lb/hr Area 402 Absorber: ≤ 0.28 lb/hr Area 411 Tank Farm Absorber: ≤ 0.16 lb/hr	PSD/BACT	Lean Solvent Temperature and Flow

ADN Tanks Subject to Subpart Kb

Based upon a review of the installation dates and capacities of the ADN tanks, the following tanks were determined to be subject to NSPS, Subpart Kb.

Air Permit #	Tank ID
X038	ADN 315
X039	ADN 316
X040	ADN 318
Unpermitted	ADN 344
X050	ADN 359
X029	ADN 382
X035	ADN 383
X036	ADN 384
X037	ADN 385
X030	ADN 301

State Regulations:

- 335-3-10-.02(9)(b); VOC

Control Equipment:
There are no add on control devices
Emission Limits and Proposed Periodic Monitoring:

Periodic Monitoring
Floating roof inspections (301); VOL Stored and Duration (301); Vapor pressure records (All)

ADN Group 1 Tanks
Ascend has indicated that the following are HON tanks. These tanks are classified as a Group 1 HON Storage Tank. These tanks are equipped with floating roofs to meet the requirements of the HON.

Air Permit #	Tank ID
Z024	ADN 302
X097	ANT 63
X097	ANT 59
X097	ANT 60
X102	Tanks 97 and 98

State Regulations:

- 335-3-11-.06(6); VOC

Control Equipment:
External Floating Roof; Internal Floating Roof

Emission Limits and Proposed Periodic Monitoring:

Periodic Monitoring
Seal gap inspection

Utilities

Boilers 5 & 6

Emissions rates are determined by EPA Reference Methods. Emission rates determined from the reference methods are based upon the average emissions of three one hour tests; therefore, the emission limits listed below are based upon three-hour averages unless otherwise noted.

The state opacity requirement would be applicable to Boilers 5 and 6; however, opacities above the levels otherwise authorized which occur as determined by the Director as a result of properly performed start-ups, shutdowns or load changes will not be considered violations. Since ESPs are utilized to control particulate emissions from these sources, the Department allowed this opacity exemption and it was incorporated into each of the Air Permits.

Particulate emissions from Boilers Nos. 5 and 6 would be limited to no greater than 0.12 lb/MMBTU each, which corresponds to 34.8 lb/hr for Boiler 5, and 38.4 lb/hr for Boiler No. 6. These particulate emission limits are based upon the state fuel burning equipment regulations.

Sulfur dioxide emissions from Boilers Nos. 5 and 6 would be limited to no greater than 4 lb/MMBTU based upon the state fuel burning regulations for Class II Counties. The sulfur dioxide emissions from Boiler Nos. 5 and 6 are further restricted to no greater than 3.9 lb/MMBTU each, 1131 lb/hr for Boiler No. 5 and 1248 lb/hr for Boiler No. 6. These limitations were placed on each of the boilers to correct for modeled SO_2 NAAQS exceedances in the area.

Periodic monitoring for the SO_2 emission limits for Boilers 5 and 6 would consist of calculating the SO_2 emission rates in lb/MMBTU, based upon the sulfur content and BTU ratings of the coal utilized as fuel. A guaranteed analysis of each shipment of coal is supplied by the vendor before a shipment is received.

These units are subject to the provisions of ADEM Admin. Code R. 335-3-8-.05, "NOx Budget Trading Program".

This unit is subject to the Boiler MACT Part 63 Subpart DDDDD. A performance tune-up is required periodically by 63.7515(d).

BART:

Boilers 5 and 6 were identified by Ascend as Best Available Retrofit Technology (BART) eligible units. NO_X, SO_2, and PM_{10} are the pollutants of concern. Ascend is required to be in compliance with the BART limitations and have the BART approved controls installed by January 1, 2013. The following table summarizes the limits and controls that will be required.

Ascend BART Emission Limitations (January 1, 2013)					
Emission Unit	**Emission Limitations**				
	NO_x	**SO_2**	**PM_{10}**	**Controls**	**Monitoring**
Boiler 5	101.22 lb/hr[1]	1.40 lb/MMbtu & 406 lb/hr	0.12 lb/MMbtu & 34.8 lb/hr	ESP	CEMs (NO_X, SO_2)
Boiler 6	109.72 lb/hr[1]	1.40 lb/MMbtu & 448 lb/hr	0.12 lb/MMbtu & 38.4 lb/hr	ESP	CEMs (NO_X, SO_2)

State Regulations:

- 335-3-4-.01; Opacity
- 335-3-4-.03; Particulate
- 335-3-5-.01; SO_2
- 335-3-14; SO_2

Control Equipment:
ESP, SNCR

Emission Limits and Proposed Periodic Monitoring:

Pollutant	**Emission Limit**	**Basis**	**Periodic Monitoring**
Particulate	0.12 lb/MMBtu; 34.8 lb/hr (#5); 38.4 lb/hr (#6)	State	Annual testing; COMs
SO_2	4 lb/MMBtu; 3.9 lb/MMBtu; 1131 lb/hr (#5); 1248 lb/hr (#6)	State	Fuel use records
Opacity	20 percent with one six-minute period up to 40 percent in any one hour period	State	COMs

Boiler 7
Emissions rates are determined by EPA Reference Methods. Emission rates determined from the reference methods are based upon the average emissions of three one hour tests; therefore, the emission limits listed below are based upon three-hour averages unless otherwise noted.

The state opacity requirement would be applicable to the No. 7 Boiler; however, opacities above the levels otherwise authorized which occur as determined by the Director as a result of properly performed start-ups, shutdowns or load changes will not be considered violations. Since ESPs are utilized to control particulate emissions from these sources, the Department allowed this opacity exemption and it was incorporated into the Air Permit. This source is also subject to NSPS, Subpart D. Subpart D requires that the unit not exhibit greater than 20% opacity except for one six-minute period per hour of not more than 27% opacity.

Particulate emissions from the Boiler No. 7 would be limited to no greater than 0.12 lb/MMBTU and 63.33 lb/hr based upon the state fuel burning equipment regulations. Subpart D also requires that particulate emissions not exceed 0.10 lb/MMBTU.

Sulfur dioxide emissions from Boiler No. 7 would be limited to no greater than 4 lb/MMBTU based upon the state fuel burning regulations for Class II Counties. The sulfur dioxide emissions from this boiler are further restricted to 1.17 lb/MMBTU and 627.2 lb/hr. These limitations were

placed on the boiler to correct for modeled SO_2 NAAQS exceedances in the area. Subpart D also requires that the SO_2 emissions from this source not exceed 1.2 lb/MMBTU.

NOx emissions from Boiler No. 7 are limited to no greater than 0.7 lb/MMBTU as required under NSPS, Subpart D. The NOx emissions are also limited to 375.27 lb/hr based upon the above noted lb/MMBTU NOx limit. NO_x emissions above the levels otherwise authorized which occur as determined by the Director as a result of properly performed start-ups, shutdowns or load changes will not be considered a violation.

These units are subject to the provisions of ADEM Admin. Code R. 335-3-8-.05, "NOx Budget Trading Program".

This unit is subject to the Boiler MACT Part 63 Subpart DDDDD. A performance tune-up is required periodically by 63.7515(d).

BART:

Boiler 7 was identified by Ascend as Best Available Retrofit Technology (BART) eligible units. NO_X, SO_2, and PM_{10} are the pollutants of concern. Ascend is required to be in compliance with the BART limitations and have the BART approved controls installed by January 1, 2013. The following table summarizes the limits and controls that will be required.

Ascend BART Emission Limitations (January 1, 2013)					
Emission Unit	**Emission Limitations**				
	NO_x	**SO_2**	**PM_{10}**	**Controls**	**Monitoring**
Boiler 7	0.36 lb/MMBtu & 193 lb/hr	0.47 lb/MMBtu & 252 lb/hr	0.10 lb/MMBtu & 64.33 lb/hr	ESP, DSI, SNCR, Baghouse	CEMs (NO_X, SO_2); Pressure Drop

State Regulations:

- 335-3-4-.01; Opacity
- 335-3-4-.03; Particulate
- 335-3-5-.01; SO_2
- 335-3-14; SO_2, NO_X

Control Equipment:
ESP, Baghouse, SNCR

Emission Limits and Proposed Periodic Monitoring:

Pollutant	**Emission Limit**	**Basis**	**Periodic Monitoring**
Particulate	0.12 lb/MMBtu; 63.33 lb/hr	State/MACT	COMs
SO_2	1.17 lb/MMBtu; 627.2 lb/hr	PSD/BACT	CEMs
NO_X	0.7 lb/MMBtu; 375.27 lb/hr	MACT	CEMs

Opacity	Not more than 20% except for one six-minute period per hour of not more than 27%	MACT	COMs

Cokers 1 & 2

Emissions rates are determined by EPA Reference Methods. Emission rates determined from the reference methods are based upon the average emissions of three one hour tests; therefore, the emission limits listed below are based upon three-hour averages unless otherwise noted.

The state opacity requirement would be applicable to Coker Nos. 1 and 2; however, opacities above the levels otherwise authorized which occur as determined by the Director as a result of properly performed start-ups, shutdowns or load changes will not be considered violations. Since ESPs are utilized to control particulate emissions from these sources, the Department allowed this opacity exemption and it was incorporated into each of the Air Permits.

Particulate emissions from Coker Nos. 1 and 2 would be limited to no greater than 0.12 lb/MMBTU each based upon the state fuel burning equipment regulations.

Sulfur dioxide emissions from Coker Nos. 1 and 2 would be limited to no greater than 4 lb/MMBTU based upon the state fuel burning regulations for Class II Counties. The sulfur dioxide emissions from Coker Nos. 1 and 2 are further restricted to no greater than 3.57 lb/MMBTU and 1370.1 lb/hr for each source. These limitations were placed on each of the sources to correct for modeled SO_2 NAAQS exceedances in the area.

Periodic monitoring for the SO_2 emission limits for Coker Nos. 1 and 2 would consist of calculating the SO_2 emission rates in lb/MMBTU, based upon the sulfur content and BTU ratings of the coal utilized as fuel. A guaranteed analysis of each shipment of coal is supplied by the vendor before a shipment is received.

This unit is subject to the Boiler MACT Part 63 Subpart DDDDD. A performance tune-up is required periodically by 63.7515(d).

BART:

Cokers 1 and 2 were identified by Ascend as Best Available Retrofit Technology (BART) eligible units. NO_X, SO_2, and PM_{10} are the pollutants of concern. Ascend is required to be in compliance with the BART limitations and have the BART approved controls installed by January 1, 2013. The following table summarizes the limits and controls that will be required.

Ascend BART Emission Limitations (January 1, 2013)					
Emission Unit	**Emission Limitations**				
	NO_X	**SO_2**	**PM_{10}**	**Controls**	**Monitoring**
Cokers 1 & 2	104.43 lb/hr	3.57 lb/MMBtu & 1370.1 lb/hr	0.12 lb/MMBtu	ESP	NO_X Monitor; Fuel Use Records

State Regulations:

- 335-3-4-.01; Opacity
- 335-3-4-.03; Particulate
- 335-3-5-.01; SO_2
- 335-3-14; SO_2

Control Equipment:
ESP

Emission Limits and Proposed Periodic Monitoring:

Pollutant	**Emission Limit**	**Basis**	**Periodic Monitoring**
Particulate	0.12 lb/MMBtu	State	COMs
SO_2	4 lb/MMBtu; 3.57 lb/MMBtu; 1370.1 lb/hr	State PSD/BACT	Fuel Use Records
Opacity	20 percent with one six-minute period up to 40 percent in any one hour period	State	COMs

Boilerhouse Coke Handling and Loading Sysytem with Baghouse and Ash Handling Storage with Bagfilters and Baghouses

There are 9 vents from the coke handling and loading system and the ash handling and storage system. These vents consist of a bagfilter for the #1 ash silo, a baghouse for the #1 ash silo transport system, two bagfilters for the #2 ash silo, a baghouse for the #2 ash silo transport system, a bagfilter for the #3 ash silo, a baghouse for the #3 ash silo transport system, a baghouse for flyash loading, and a baghouse for the coke handling and loading system.

The state opacity requirement would be applicable to each of the boilerhouse coke handling and loading and ash handling and storage emission points.

The particulate emissions from these emission points would be subject to the state process weight curve.

State Regulations:

- 335-3-4-.01; Opacity
- 335-3-4-.04; Particulate

Control Equipment:
Bagfilters

Emission Limits and Proposed Periodic Monitoring:

Pollutant	**Emission Limit**	**Basis**	**Periodic Monitoring**
Particulate	$E=3.59P^{0.62}$	State	Visual Observation
Opacity	20 percent with one six-minute period up to 40 percent in any one hour period	State	Visual Observation

Boilerhouse NSPS Kb Tank

Based upon a review of the installation dates and capacities of the boilerhouse tanks, the Boiler Fuel Oil tank was determined to be subject to NSPS, Subpart Kb. Based upon the capacity and vapor pressure for the affected tank, only the recordkeeping requirements (60.116b(a) and (b)) would be applicable to this tank. The state regulations for loading and storage of VOC's would not be applicable to this tank since the vapor pressure listed is less than 1.5 psia.

Air Permit #	Tank ID
X054	054

State Regulations:

- 335-3-10-.02(9)(b); VOC

Control Equipment:

There are no add on control devices

Emission Limits and Proposed Periodic Monitoring:

Periodic Monitoring
NA

HMD Unit Operations

Hexamethylenediamine (HMD) Synthesis Unit with Hydrogen Synthesis Units

B-C Hydrogen Synthesis Reformers:

The state opacity requirement would be applicable to the B – C Hydrogen Synthesis reformers.

Particulate emissions from each of the B – C Hydrogen Synthesis Reformers would be limited to no greater than 0.31 lb/MMBtu, based upon the state fuel burning equipments regulations.

Sulfur Dioxide emissions from each of the B – C Hydrogen Synthesis Reformers would be limited to no greater than 4 lb/MMBtu, based upon the state fuel burning regulations for Class II Counties.

NSPS:

Subpart VV

The HMD Manufacturing Unit is subject to the LDAR requirements of NSPS, Subpart VV.

Subpart NNN

The HMD Refiner #1 is subject to NSPS, Subpart NNN. The TRE for this source is greater than 8.0.

Periodic Monitoring:

B – C Hydrogen Synthesis Reformers

Opacity/Particulate
As an indicator of compliance with the opacity and particulate limits on these sources, Ascend has proposed to maintain the flue gas oxygen content between 1.5% and 5.0% and the flue gas temperature at a maximum of 1093°C, both based upon 3 hour rolling averages. These reformers burn natural gas and AFT (Adiponitrile Flasher Tails). The maximum allowable particulate emissions for each of these sources would be 9.3 lb/hr (0.31 lb/MMBtu x 30 MMBtu/hr). Average particulate emissions during 1990 stack testing were reported as 0.24 lb/hr.

SO_2
Due to the low sulfur contents of natural gas and AFT (0.04%), no periodic monitoring should be necessary to indicate compliance with the SO_2 emission limits for these sources. Furthermore, worst case calculated SO_2 emissions were reported as 9.6 lb/hr SO_2 (based upon 3 times higher sulfur content that average AFT sulfur content), which corresponds to 0.32 lb/MMBtu SO_2, and reported stack testing (1990) indicated SO_2 emission rate of 2.28 lb/hr (0.08 lb/MMBtu).

NNN
The HMD Refiner #1 is subject to the requirements of Subpart NNN. Since the TRE of this stream is greater than 8.0, no monitoring is required under the NSPS. No periodic monitoring should be necessary.

This unit is subject to the Boiler MACT Part 63 Subpart DDDDD. A performance tune-up is required periodically by 63.7515(d).

There are several Air Permits which cover units within the HMD unit (excluding tanks). These permits include:

Air Permit #	Description
X043	Hydrogen Synthesis Unit
X044	Hexamethylenediamine (HMD) Manufacturing
X055	250,000 gallon fixed roof crude HMD storage tank
X060	15,320 gallon BHMT storage tank (HMD 527)

State Regulations:

- 335-3-10-.02; VOC
- 335-3-4-.01; Opacity
- 335-3-5-.01; SO_2
- 335-3-4-.04; Particulate

Control Equipment:
Absorbers

Emission Limits and Proposed Periodic Monitoring:

Pollutant	Emission Limit	Basis	Periodic Monitoring
Particulate	0.31 lb/MMBtu	State	Flue Gas O_2 and Temperature
SO_2	4 lb/MMBtu	State	NA
Opacity	20 percent with one six-minute period up to 40 percent in any one hour period	State	Flue Gas O_2 and Temperature

Tetrabutyl Alkyl Amine (TAA) Unit

This unit vents through emission point HMD 204, the low pressure diamine stack in the HMD Unit. There are no particulate sources in this unit and there are no emission standards for this unit other than those listed in the General Permit Provisos. No periodic monitoring is necessary.

Items Deleted From Previous Title V Permit

Operating Summary No. 4; Emission Unit 053 – *#8 Boiler*

Operating Summary No. 12; Emission Unit 099 – *Acrilan Manufacturing Unit*

Operating Summary No. 13; Emission Units 046, 094, 095, 096, 097 – *Acrilan Tanks*

Operating Summary No. 14; Emission Unit 101 – *Technical Center Spinning Operations*